

## To Schools, Non-Profits

# Marshall Donates 'Computers for Learning'

by Joy Carter

Last year, Marshall donated \$8.5 million in computer equipment to schools and nonprofit organizations serving students in pre-kindergarten through 12th grade levels.

The excess computers, monitors, printers and other equipment were awarded through Computers for Learning, a federal program established by Vice President Al Gore in 1997.

Now, new procedures have been put in place to further enhance an already successful program through the use of — you guessed it — computers. A new Website funded by the U.S. Department of Energy has been introduced to make it quicker and easier for schools participating in the program to register and request equipment they need. The Web address is: [www.computers.fed.gov/](http://www.computers.fed.gov/)

"Schools and organizations seeking excess equipment from

Marshall already are using the Website to register online," said Bill Anderson, Marshall's pre-college education officer. "One advantage of the Website is that it makes it easy for individual schools to register and participate," said Anderson. "It used to be that few individual schools participated. It was mostly school systems."

Now, registered schools and educational organizations may also use the Website to list their needs. "It allows schools greater access to all the computer equipment that is available and allows federal agencies to identify schools nationwide that need the equipment," said Anderson.

For schools or educational nonprofit organizations seeking additional information or requiring help to register, a toll-free Computers for Learning hotline, operating from noon-4 p.m. CDT Monday through Friday, is available. The hotline number is 1-888-362-7870.

## Griner Dedicates 'RAD 1' Exhibit at U.S. Space & Rocket Center

by Joy Carter

Introductions were in order for Rad 1 — NASA's newest, most "radical" exhibit staffer — during a dedication ceremony Monday at the NASA Visitors Center exhibit at the U.S. Space & Rocket Center.

Acting Center Director Carolyn Griner introduced Rad 1 — a robot affectionately known as "the radical one" — and recognized Marshall employees and contractors who breathed life into the mechanical man.

Rad 1 is a computer-programmed, air-driven robot that adds a personal touch to Marshall's new exhibit at the space museum. Sheathed in glistening gold, Rad 1 "works" the exhibit console controls. His gentle, human-like characteristics — a blink of the eyes, a tilt of the head, a motioning gesture of his arm — add to his friendly personality.



NASA photo by Adeline Byford

Acting Center Director Carolyn Griner, fourth from right, stands with the Marshall team members responsible for NASA's newest, most radical exhibit — RAD 1— following a dedication ceremony Monday at the NASA Visitors Center exhibit at the U.S. Space & Rocket Center.

He extends a warm welcome to museum visitors and interacts with Marshall employees — who appear on

four video screens positioned above him — to introduce guests to a few of the men and women of the Marshall Center.

## **LB&B Associates Inc. Selected for Award of Contract for Center's Test Operations Support**

LB&B Associates Inc. of Columbia, Md., a small, minority, woman-owned business, has been selected for award of a contract to provide test operations support for Marshall's Science and Engineering Directorate.

The contract starts with a one-year base period, followed by four one-year options which may be exercised at Marshall's discretion. If all options are exercised, the contract would be worth as much as \$30,930,739. The work to be performed under the contract includes technician support to operate and maintain the test facilities in Marshall's Propulsion Laboratory.

## **Dumbacher Accompanies X-33 Exhibit to National Conference of State Legislatures**

Dan Dumbacher, NASA X-33 deputy program manager, is accompanying Marshall Center's X-33 exhibit to the National Conference of State Legislatures this week in Las Vegas.

The X-33 is a vehicle that will demonstrate America's new space launch technologies. This experimental launch vehicle is a vital part of developing an operational Reusable Launch Vehicle, which will substantially reduce the cost of landing payloads to low-Earth orbit. The X-33 program is a major assignment of the Space Transportation Programs Office at Marshall. More information about the X-33 program is available at the following Web site: <http://x33.msfc.nasa.gov>



NASA photo by Adeline Byford

## ***Center Thanks Space Systems/Loral for Donation***

Acting Center Director Carolyn Griner, right, presents a plaque July 9 to John Stammreich, vice president for government programs at Space Systems/Loral, in recognition of the firm's donation to the Center. Space Systems/Loral donated a laboratory consisting of an electrostatic levitator with supporting equipment to Marshall's Space Sciences Laboratory.

## ***Under Center's Human Resources Office***

# **Secretarial Initiative Begins**

The Center's Human Resources Office, in partnership with the American Federation of Government Employees (AFGE), has begun implementation of the Secretarial Initiative at Marshall. The initiative reinvents the role of the traditional secretary and is the result of an extensive review of all clerical functions at Marshall.

Implementation includes placement of the traditional secretary in a "bridge" position, realigning some positions organizationally to create more flexibility in assignments. As a result of the Secretarial Initiative, new titles include management support clerk, management support assistant and executive support assistant. More information about the Secretarial Initiative at Marshall may be obtained by contacting your personnel management specialist.

## **Marshall-Sponsored Programs to be Focus at Event in Oshkosh, Wis.**

Exhibits highlighting Marshall's major roles in such programs as the X33/X34, International Space Station, Advanced X-ray Astrophysics Facility and microgravity research will be featured at Experimental Aircraft Association AirVenture Oshkosh July 29- Aug. 4 in Oshkosh, Wis.

This event is the world's largest sport aviation event, annually drawing more than 800,000 people and 12,000 airplanes to Oshkosh.

This large and geographically diverse audience from the United States and abroad affords Marshall an excellent opportunity to inform the public about its many programs.

## **Orders for Marshall Picnic T-Shirts Are Now Being Taken at Exchange**

Order forms for NASA's 40<sup>th</sup> Anniversary "Pioneering the Future" commemorative T-shirts are available from the NASA Exchange, CO10X, in Bldg. 4752.

The T-shirt, with artwork featuring NASA's heritage, significant space exploration contributions made by Marshall and the agency's 40th anniversary logo, may be ordered in adult sizes S-XL for \$10; XXL for \$11; and XXXL for \$12. There are two choices of material, 100 percent cotton or 50 percent cotton/50 percent polyester blend.

The deadline for submitting T-shirt orders and payment is July 31. **Contact:** NASA Exchange at 544-7564.



# Center Astronomers Spot First Soft Gamma Repeater in 19 Years

by Steve Calatrello

A team of astronomers with Marshall's Space Sciences Laboratory has discovered the first new soft gamma repeater — a special class of neutron star — in 19 years.

This discovery marks only the fourth confirmed observation of a soft gamma repeater. Soft gamma repeaters are believed to be neutron stars that emit bursts of soft, or low-energy, gamma rays at irregular intervals. They are unlike most hard, or high-energy gamma ray bursts, which sweep past Earth on a daily basis.

With this discovery, the Marshall team of scientists believes that soft gamma repeaters are just one short phase in the life of a magnetar — a neutron star with an extremely powerful magnetic field. If this theory is correct, then soft gamma repeaters are caused by massive "starquakes" as the magnetic field wrinkles the star's crust. These wrinkles are only a few millimeters high, but release more energy than all of the earthquakes that have ever occurred on Earth.

Marshall scientists made the discovery in mid-June, when they observed at least 26 "starquakes" with the Burst and Transient Source Experiment — a satellite-based monitor that detects and

locates gamma-ray bursts. NASA launched the experiment aboard the Compton Gamma Ray Observatory in April 1991 to help better understand sources of gamma-ray energy. Since that time, approximately 2,000 bursts have been detected, measured and analyzed.

"There's no doubt about this one," said Dr. Chryssa

Kouveliotou, a scientist with the Universities Space Research Association who works at Marshall. "It went off several times and was very, very powerful. This is quite exciting."

The cosmic activity was also detected and registered by instruments aboard the Rossi X-ray Timing Explorer, which can measure bursts in much finer detail.

NASA launched Rossi in December 1995 to make astronomical observations in the

X-ray range, a form of energy that is emitted by powerful events in the universe.

Soft gamma repeaters have mystified scientists since they were first seen 19 years ago. Earlier this year, Kouveliotou led a team that confirmed the existence of a magnetar, a neutron star with a magnetic field about 800 trillion times stronger than that of the Earth. More information may be found at the following website: <http://science.msfc.nasa.gov>

***"There's no doubt about this one. It was very, very powerful. This is quite exciting."***

— Dr. Chryssa Kouveliotou

## Center Scientists Show How Research in Space Brings Better Health Care to Earth

by Bob Thompson

Promising medical treatments and disease-fighting drug research — enhanced by science experiments in space — is the topic of discussion by Marshall scientists at the American Crystallographic Association (ACA) Conference, in Arlington, Va., that began Sunday and continues through today.

The conference features an exhibit highlighting NASA's efforts to improve health care on Earth. NASA representatives are on hand to discuss how scientists are using the unique environment of space to unlock the secrets of disease, and living cells and tissues, involving many of our country's major public health challenges. NASA's goal is to advance fundamental scientific knowledge using the unique environment of microgravity or the near-weightlessness of space and enhance research so that universities and private companies may develop improved

drugs and cell tissues for better medical treatments.

In Space Shuttle experiments, Marshall researchers grow larger and more uniform protein crystals than crystals grown on Earth. Pure, precisely ordered protein crystals of sufficient size and uniformity are in high demand by drug developers. Structural information gained from X-ray analysis of protein crystals can provide a better understanding of the role of a given protein in the body's immune system and help in the development of more effective drugs and life-saving treatments for many diseases.

Marshall's biotechnology research has contributed information to the understanding of many diseases, including AIDS, heart disease, cancer, diabetes, respiratory syncytial virus, sickle cell anemia, hepatitis and rheumatoid arthritis. Marshall's cell growth experiments have led to new research models in cellular and molecular biology and new tissues for

### 'Summer Skies' to be Topic At Astronomical Society Planetarium July 25

A program on "Summer Skies" will be featured at 7:30 p.m., Saturday, July 25, at the Von Braun Astronomical Society Planetarium in Monte Sano State Park. Following the planetarium show, telescopes will be available to view constellations.

Admission for nonmembers is \$2 for adults (12 and older), \$1 for children 6-11 years and free for ages 5 and younger. Members are admitted free. For more information about the "Summer Skies" program, call Mitzi Adams at 544-3026.

transplant operations.

NASA's Biotechnology Program is managed by the Microgravity Research Program at Marshall. More information about NASA biotechnology science experiments is available at the following Web site:

<http://microgravity.msfc.nasa.gov/MICROGRAVITY/Biot.html>





John Troy, EG&G Environmental Branch manager, inspects hazardous chemicals collected May 21 during "Amnesty Days" at Marshall.

NASA photo

## Chemicals Collection Continues at Center

A Center-wide program affording employees with the opportunity to clear shelves of hazardous materials with no questions asked — is continuing at Marshall.

"Amnesty Days" or "user-friendly" turn-in sessions have been planned at Marshall as a result of hazardous material inspections of reported inventories.

A turn-in session May 21 at Marshall resulted in a total collection of 33,500 pounds of hazardous material. The next "Amnesty Day" is set for 9 a.m.-2 p.m. today at the East Test Area gate, just south of Bldg. 4566.

Future collection dates are Aug. 17, Sept. 14 and Oct. 15. For details, times and locations, call John Troy at 544-4787.

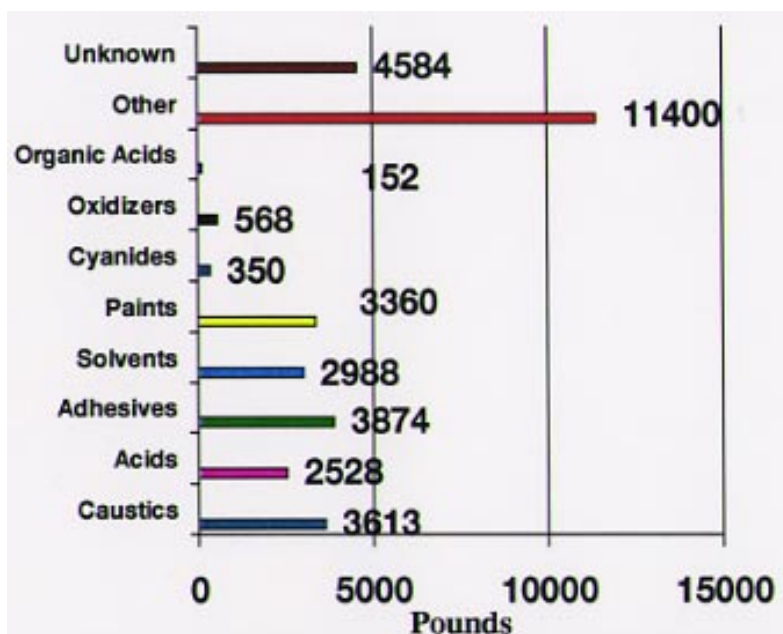
## Leading Scientists Meet to Map Out Astrobiology Strategy

Leading scientists from around the world are meeting this week in a critical first step in planning NASA's emerging astrobiology program. In a three-day "roadmapping" session that began Monday and continues through today at Ames Research Center in Calif., participants discussed development of a five-year strategic plan for astrobiology research, next-generation missions and technology requirements.

The goal of the workshop is to provide direction and set the tone for astrobiology research and its impact on NASA's missions, both in the near term and looking ahead to the year 2020.

Astrobiology is the search for the origin, evolution and destiny of life in the universe. It involves research to gain understanding of the origins of life in the universe, the formation and evolution of habitable worlds, life's evolution and the biogeochemical cycles in the Earth's oceans and atmosphere, and the potential for biological evolution beyond an organism's planet of origin.

Amnesty Day May 21:  
Total material collected at Marshall — 33,500 pounds



The roadmap team will define top-level mission and technology requirements to achieve astrobiology science goals and map these requirements onto NASA's future missions and technology development programs. Topics for discussion include life's molecular roots, the cosmic context for life, the origin of terrestrial life and the prospects for life beyond the planet of origin.

### Obituaries

**Bolton, Charles**, 67, Trinity, Ala., died June 26. He retired from Marshall in 1988 where he worked as an aerospace engineering technician.

**Crouch, Charles**, 74, Huntsville, died July 3. He retired from Marshall in 1983 where he worked as an engineering technician.

## Upcoming Events

### Marshall Picnic Passes Available; Meal Tickets Now On Sale

Passes are now available and meal tickets may be purchased for this year's Marshall Center Picnic set for 4-9 p.m. Saturday, Aug. 22, at the U.S. Space & Rocket Center.

Tickets for a pork or chicken barbecue dinner costing \$5 per person may be purchased from administrative officers through Aug. 14. Food will be served 4:30-7:30 p.m. in the Space Camp cafeteria.

A bonus door prize ticket will be included with each meal ticket purchase. The bonus door prize ticket drawing is at 6:15 p.m. at the main stage and must be claimed by 8:15 p.m. Additional door prizes will be drawn at 8:15 p.m. and ticket holders must be present to win.

A picnic pass, providing free admission to the Space & Rocket Center, is required of all picnic attendees.

Marshall employees, on-site contractors, retirees and immediate family members are invited. More picnic information may be found at the following Web site:  
<http://picnic98.msfc.nasa.gov/>

### Job Interviews Focus of CTAP Workshop Set for Thurs.

Marshall's Career Transition Assistance Program (CTAP) Center will conduct a Job Interview Workshop 9 a.m.-noon Thursday in Bldg. 4200, room G-13. Federal employees and spouses may attend. To register, **contact:** CTAP Center, 5-1354 or 961-1354

### Business Start-Up Consultations Available by Appointment Thurs.

Northeast Alabama Regional Small Business Development Center representatives will be available Thursday at the Career Transition Assistance Program Center (CTAP) to offer personal consultations about business development and/or starting a business.

An appointment is required for private, one-hour sessions. Federal employees and spouses may attend. **Contact:** CTAP Center, 5-1354 or 961-1354



NASA photo by Adeline Byford

### NASA Publications Available at Relocated Public Inquiries Office in Bldg. 4203

Public Inquiries Specialist Marita Kaufman stands ready to assist visitors at Marshall's Public Inquiries Office in Bldg. 4203, room 1109. The office, formerly located in Bldg. 4200, provides a variety of materials including NASA Fact Sheets, posters and lithographs.

## Space Environments and Effects

# Conference Looks at Threats to Spacecraft

by Bob Thompson

A key to the future of space travel — measuring the long-term, harsh effects of space — is being discussed by Marshall researchers, industry representatives, other government agencies, and academia at the Nuclear and Space Radiation Effects Conference, in Newport Beach, Calif., that began Tuesday and continues through today.

The conference features a Marshall-sponsored Space Environments and Effects program exhibit highlighting NASA's efforts to understand the threats posed by the space environment to spacecraft.

NASA has conducted many experiments measuring deterioration on the surfaces of the Russian space station Mir. Researchers have tested samples of thermal control paints, chemical coatings, mirrors, optics and other materials being considered for future enhancements on the International Space Station.

During spacewalks, astronauts have attached external experiments to the outside of the Mir and used instruments to

scan Mir's surface coatings. These studies have yielded vital understanding of the contamination that spacecraft face in their orbiting environment.

"A major objective of the Shuttle/Mir missions, and investigations such as the space environments and effects experiments, is to lower design and operational risks for the Space Station," said Steve Pearson, program manager for the Space Environments and Effects program at Marshall.

The Space Station is being designed for a 10-15 year operational life time. It is considered to be the largest cooperative scientific program in history, drawing on the resources and scientific expertise of 16 nations: the United States, Canada, Japan, 11 European countries, Russia and Brazil.

To establish this large laboratory platform in orbit around the Earth, the first of the Space Station's assembly missions is scheduled for launch in November 1998.

More information about Space Environments and Effects experiments may be found at the following Web site:  
<http://see.msfc.nasa.gov/>



## Employee Ads

### Miscellaneous

- ★ Baby bed (no mattress) \$40; Diaper Geni \$10; car carrier, \$10; love seat, \$25. 355-6116
- ★ Two burial plots in Huntsville Memory Gardens, \$1,500; Kirby vacuum cleaner, \$85. 534-0939
- ★ Four barrel-back bar stools, \$60; four steel folding chairs, \$25. 837-8797
- ★ Rainbow vacuum cleaner \$350. 772-7842
- ★ Twin mattress, box springs, \$50. 498-2116
- ★ Shop manuals for 1989 Dodge Dynasty, \$25. 895-9350 after 4:30 pm
- ★ Ethan Allen heirloom furniture, eight pieces, \$1,000; oak kitchen table w/four chairs, \$250. 519-6536
- ★ Library and end tables, golf clubs/balls, porch rocking chairs. 498-5377
- ★ Nordic Trac Pro cross country skier, \$250. Leave message at 830-0851
- ★ Reel mower, 20", 2 hp, self-propelled, with bagger, \$250. 837-0085

### Vehicles

- ★ 1996 Pontiac Trans Sport van, 7-passenger, equipped, \$12,500 obo. 772-7842
- ★ 1996 Lexus LS400, equipped, 22K miles. 881-8633
- ★ 1982 Yamaha Vision 550, 12,500 miles, garaged, \$1,699, call after 6 p.m. 233-7207
- ★ 1989 Buick Century, blue, 4-door, automatic, air, AM/FM, stereo, power locks, \$3,000. 851-6461
- ★ 1985 Mercedes, forest green, 300D turbo, low mileage, 4-dr sedan, \$7,150. 205-461-4816
- ★ 1992 Cadillac Sedan DeVille, 4.9 liter, V-8, A/C, power, burgundy, landau roof, \$8,300. 650-2173
- ★ 1993 Ford Escort LX, 5-speed, hatchback, green, air, 78K miles, \$4,700 obo. 461-8706 leave message
- ★ 1995 Grand Voyager, V-6, dual air, 58K miles, \$9,750. 837-0085

## Boats

- ★ 1989 Caravelle Glasstream, 18-ft boat, 175 hp, I/O, \$4,300. 722-0417
- ★ 1985 Ski Boat, Cheetah 170, Mercruiser 140 hp, 18-ft, trailer, fully equipped, \$3,995. 883-8399
- ★ 28' Cabin cruiser, twin engine, sleeps six, \$15,000 obo, boat house available. 880-0880

## Wanted

- ★ Bicycle, multi-gear, mountain bike in good condition. 534-8961
- ★ Extra hard drive and memory for PC, 883-2757
- ★ Thermax Vacuum cleaner. 837-0085

## Free

- ★ German Shepherd puppy mix, 7 months old, male, 885-3767
- ★ Washing machine, works but leaks, you pick up. 882-6124

## Center Announcements

- ☛ **MOO** — The Management Operations Office (MOO) retirees will meet for breakfast/lunch at 10 a.m. July 23 (4th Thursday each month) at the Cracker Barrel in Madison. Current or former MOO employees are invited. **Contact:** 539-0042
- ☛ **Toastmasters** — The NASA Lunar Nooners Toastmasters Club will meet at 11:30 a.m. Tuesday, July 28, in the Bldg. 4610 cafeteria conference room. All Marshall employees, contractors and friends are invited. **Contact:** Lee Johns, 544-5142
- ☛ **NASA Business Cards** — The NASA Exchange offers 500 two-color cards for \$20.50; 1,000 two-color cards for \$21.50; 500 three-color cards for \$40.50 and 1,000 three-color cards for \$41.50. The two-color card has the vector logo and blue printing and the three-color card includes the vector

logo with black printing. Five format styles are available. **Contact:** 4-7564.

☛ **Open House Surplus Sale** — Cases of 24 20-ounce Diet Pepsi are available for \$11 per case at the NASA Exchange in Bldg. 4752. **Contact:** 544-7564.

☛ **Shuttle Buddies** — The Shuttle Buddies will meet for breakfast at 9:15 a.m. July 27 (each fourth Monday) at Shoney's on University Drive West. **Contact:** Deemer Self, 881-7757

☛ **Mens' Bowling League** — Due to the closing of Monarch Lanes, the NASA Mens' Bowling League will be moving to Pin Palace. An organizational meeting is scheduled for 6 p.m. Aug. 4 at Pin Palace in the conference room. All team captains or a representative should attend. Pin Palace can accommodate up to 14 teams. New teams or members also should attend this meeting. **Contact:** Chuck Seal, 544-1120 or Steve Rodgers, 544-2973

☛ **MESA** — The Marshall Engineers & Scientists Association (MESA), IFPTE Local 27, will meet at 11:30 a.m. Thursday, July 23 at the northeast end of Bldg. 4471, room C-105. Refreshments will be served and all MESA members are invited.

## Job Opportunities

**CPP 98-96-CP, AST, Flight Systems Test, GS-861-14, S&E, Systems Analysis and Integration Laboratory, Systems Test Division, Payloads & Experience Test Branch.** Closes today.

**CPP 98-92-RE, AST, Liquid Propulsion Systems, GS-861-15, S&E, Propulsion Laboratory.** Closes July 24.

**CPP 98-95-RE, AST, Electronic Instrumentation Systems, GS-855-14, S&E, Propulsion Laboratory, Propulsion Test Division, Propulsion Test Measurement Systems Branch.** Closes July 24.

**CPP 98-99-JB, AST, Aerospace Flight Systems, GS-861-14, S&E, Space Systems Chief Engineers, Microgravity Experiment Projects Engineering.** Closes July 30.

# MARSHALL STAR

Marshall Space Flight Center, Alabama 35812

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